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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,524

Applicant(s)

GUM, ARNOLD J.

Examiner

Stephen M. D'Agosta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15,30,32-39,46,47,59-66 and 69-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-39 is/are allowed.
- 6) ☒ Claim(s) 15,30,46,47,59, 66 and 69-74 is/are rejected.
- 7) ☒ Claim(s) 60-65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 15, 30, 32-38, 46-47, 59-66 and 69-74 have been considered but are moot in view of the new ground(s) of rejection.

1. (fix required) Claim 39 incorrectly depends from cancelled claim 29. The primary examiner assumes it depends from claim 32. Also, claim 56 has been cancelled.

2. Claims 15, 30, 46 and 59 have been amended with previously rejected claims, hence the primary examiner believes his art continues to read on these claims. The primary examiner broadly interprets the prior art of record to read on the claim limitations. Novel material has been pointed out (previously) and an amendment containing these claims would most likely have a more favorable outcome:

a. For claim 15, the prior art teaches:

“As per claim 15, Masao teaches claim 1 but is silent on wherein the at least one criterion is variance from a pre-determined normal value.

McLoughlin teaches examination of background noise and adjusting the voice based on this value, which reads on variance from a pre-determined normal value, eg. no noise present).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that the at least one criterion is variance from a pre-determined normal value, to provide means for measuring/checking that operational parameters are within predetermined normal ranges thus ensuring optimal communications occurs.

b. For claim 30, the prior art teaches:

“As per claim 30, Masao teaches claim 29 wherein the adjustor runs the audio signal through free-form voice modification filtering (abstract teaches processing transmitter's voice with selected voice color data to change it) but is silent on to heighten understandability and reduce variance from the at least one stored recognition template.

McLoughlin teaches heightening understandability by reducing the amount of background noise (eg. variance from zero noise present) which improves intelligibility.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that it heightens understandability and reduces variance from the at least one stored recognition template, to provide means for assisting the parties-to-the-call to better understand and identify the people on the call.

c. For claim 46, the prior art teaches:

“As per claim 46, Masao teaches claim 45 further comprising the user receiving the at least one result of said comparing by providing of feedback to the user, the feedback being of at least one result of said comparing (abstract teaches user selecting a voice color data and may wish to change it based on not liking the voice outputted).”

d. For claim 59, the prior art teaches:

“As per claim 59, Masao teaches claim 56 wherein evaluating comprises statistically comparing and assigning a percent variance of the audio signal from the stored recognition template (Abstract teaches the user selecting a voice color data which is combined with their voice so as to change the user's voice which requires the two "voices" to be statistically combined so that a final outputted voice is attained).”

3. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The primary examiner notes that “Masao teaches a receiver that receives an audio signal (abstract teaches processing both the read voice color data and transmitter's speech signal which inherently requires receiving the transmitter's speech signal. The examiner notes that the figure shows both input and output ports, #11 and #15 for inputting/outputting of audio signals

since they are connected to A/D and D/A converters for appropriate conversion of analog audio to digital signal; A comparator that receives the audio signal from said receiver, and that receives at least a first of the least one criterion from said memory, wherein said comparator compares the audio signal to the first criterion, and wherein said comparator outputs at least one result of the comparison (abstract teaches a "voice transformation means" that processes the inputted/received voice with the selected voice color data/criterion; and An adjustor that adjusts the audio signal based on the result of said comparator (Abstract teaches changing the inputted voice to an outputted voice that is adjusted per the selected voice color data).

4. New claim 66 is rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 46 and 59 rejected under 35 U.S.C. 102(b) as being anticipated by

Masao JP11015498 (hereafter Masao).

As per claim 46, Masao teaches an method of modifying an audio profile in a wireless device (Abstract teaches selecting from a plurality of voice color data, transmission means and figure shows an antenna for wireless communication #20), comprising:

Entering, by a user of the wireless device, of a first criterion (Abstract teaches voice color data storage #40);

Comparing an audio signal received by the wireless device to the first criterion (abstract teaches processing both the read voice color data and transmitter's speech signal which inherently requires receiving the transmitter's speech signal. The examiner notes that the figure shows both input and output ports, #11 and #15 for inputting/outputting of audio signals since they are connected to A/D and D/A converters for appropriate conversion of analog audio to digital signal);

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Adjusting the audio signal based on said comparing (abstract teaches a “voice transformation means” that processes the inputted/received voice with the selected voice color data/criterion); and

Playing the adjusted audio signal to the user or broadcasting the adjusted audio signal to a remote caller (Abstract teaches changing the inputted voice to an outputted voice that is adjusted per the selected voice color data).

further comprising the user receiving the at least one result of said comparing by providing of feedback to the user, the feedback being of at least one result of said comparing (abstract teaches user selecting a voice color data and may wish to change it based on not liking the voice outputted).

wherein said adjusting is responsive to an input from the user of the wireless device (abstract teaches user selecting voice color data) and wherein the input from the user is based on at least one result of said comparing (abstract teaches user selecting voice color data which the user may want to change based on the outputted voice, eg. they don't like it so they wish to change it, and hence the user's input is based on at least one result of the comparing).

As per **claim 59**, Masao teaches an method of modifying an audio profile in a wireless device (Abstract teaches selecting from a plurality of voice color data, transmission means and figure shows an antenna for wireless communication #20), comprising:

Entering, by a user of the wireless device, of a first criterion (Abstract teaches voice color data storage #40);

Comparing an audio signal received by the wireless device to the first criterion (abstract teaches processing both the read voice color data and transmitter's speech signal which inherently requires receiving the transmitter's speech signal. The examiner notes that the figure shows both input and output ports, #11 and #15 for inputting/outputting of audio signals since they are connected to A/D and D/A converters for appropriate conversion of analog audio to digital signal);

Adjusting the audio signal based on said comparing (abstract teaches a “voice transformation means” that processes the inputted/received voice with the selected voice color data/criterion); and

Playing the adjusted audio signal to the user or broadcasting the adjusted audio signal to a remote caller (Abstract teaches changing the inputted voice to an outputted voice that is adjusted per the selected voice color data).

wherein said comparing comprises evaluating the audio signal against at least one stored recognition template (abstract teaches storing a plurality of utterers voice color data that can be selected for comparison to the transmitter's voice so that they are combined into a “new voice”. Hence the transmitter's voice and selected voice are evaluated and combined into a new voice – one skilled would ensure/evaluate that the two voices are not the same).

wherein evaluating comprises statistically comparing and assigning a percent variance of the audio signal from the stored recognition template (Abstract teaches the user selecting a voice color data which is combined with their voice so as to change the

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user's voice which requires the two "voices" to be statistically combined so that a final outputted voice is attained).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 47 rejected under 35 U.S.C. 103(a) as being unpatentable over Masao.

As per **claim 47**, Masao teaches claim 46 **but is silent on** wherein said providing of feedback is performed by displaying an icon to the user on a display screen of the wireless device.

Masao teaches a wireless phone (figure 1 shows antenna and title regards a "telephone device") and the examiner notes that virtually all cellular phones provide a display means to provide visual feedback to the user regarding mode and/or call information. Hence one skilled would provide a display to provide feedback to the user regarding audio profile selection.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that it comprises an output display that provides feedback to the user of at least one result from said comparator, to provide means for the user to understand what selections they have made regarding audio profile.

Claim 69-74 rejected under 35 U.S.C. 103(a) as being unpatentable over Masao as applied to claims 1, 41 above and/or claim 69 below, and further in view of Nordenstrom US 5,668,868 (hereafter Nordenstrom).

As per **claim 69**, Masao teaches a method of modifying an audio signal/profile in a wireless device (abstract), comprising the steps of:

c) having the user to selectively apply filtering to the played back audio signal (abstract teaches the user can select a voice color data)

d) filtering the audio signal according to said polling of the user (abstract teaches the system adjusting the transmitter's voice with the voice color data)

g) applying the audio profile to the subsequent audio signal (abstract teaches a new voice is outputted based upon the user's selection of voice color data)

but is silent on

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- a) recording an audio signal
- b) playing back the audio signal to the user of the wireless device
- e) playing back the filtered audio signal to the user
- f) repeating steps (c)-(e) until the user elects, upon said polling, to retain a then current filtering configuration, which then the current filtering configuration comprises the audio profile.

Nordenstrom teaches a memorandum recorder includes a recorder unit and a speaker (24) with an associated volume control dial (26). An input jack (16) is used for accepting a communication line coupled to the telephone (17). An output jack (20) is used for accepting a communication line (22) coupled to a telecommunications device. The memory comprises an EPROM which is situated within an interior space of the housing (12) and adapted to store audio signals. A controller is coupled to the input and output jacks, the memory and the speaker. The controller allows communication between the input and output jacks, in a first mode of operation. Storage of audio signals from a mouthpiece of the telephone is allowed in a second mode of operation, upon depression of a record button. Playback of the stored audio signals, via the speaker, is allowed in a third mode of operation (abstract and figures 1-9).

Hence one skilled would provide for the user to change voice characteristics and record them for playback thus allowing the user to review the voice changes and modify them until they like the new.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that steps a, b, e and f are performed, to provide means for the user to continually modify changes to their voice until they like the "new voice" before they actually use the new voice in a phone call.

As per **claim 70**, Masao in view of Nordenstrom teaches claim 69 **but is silent on** wherein the user selectively applies filtering by pressing a numbered key on the wireless device.

Masao teaches the user selecting from the plurality of voice color data stored which one skilled would provide as requiring either multiple buttons being depressed or one hotkey-like button being depressed.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao in view of Nordenstrom, such that the user selectively applies filtering by pressing a numbered key on the wireless device, to provide means for a user to select a voice profile/signal via pressing a button on the phone's keypad.

As per **claim 71**, Masao in view of Nordenstrom teaches claim 70 wherein the numbered key corresponds to a pre-stored speech template (abstract teaches storing of a plurality of utterer's voice color data which can be selected, via keypad, by the user).

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As per **claim 72**, Masao in view of Nordenstrom teaches claim 69 wherein the audio signal is an incoming audio signal to the wireless device from a remote caller (abstract teaches changing the transmitted or received speech, where "received" reads on remote caller).

As per **claim 73**, Masao in view of Nordenstrom teaches claim 69 wherein the audio signal is an outgoing audio signal from the wireless device to a remote caller (abstract teaches changing the transmitted or received speech, where "transmitted" reads on an outgoing call from the wireless device to a remote caller).

As per **claim 74**, Masao in view of Nordenstrom teaches claim 69 wherein the subsequent audio signal is an outgoing call from the wireless device to a remote caller (abstract teaches changing the transmitted or received speech, where "transmitted" reads on an outgoing call from the wireless device to a remote caller).

Claims 15, 30, 39, 66 rejected under 35 U.S.C. 103(a) as being unpatentable over Masao and further in view of McLoughlin.

As per claim 15, Masao teaches an apparatus for providing a custom profile in a wireless device (Abstract teaches transmission means and figure shows an antenna for wireless communication #20), comprising:

A memory into which at least one criterion is entered by a user of the wireless device (Abstract teaches voice color data storage #40);

A receiver that receives an audio signal (abstract teaches processing both the read voice color data and transmitter's speech signal which inherently requires receiving the transmitter's speech signal. The examiner notes that the figure shows both input and output ports, #11 and #15 for inputting/outputting of audio signals since they are connected to A/D and D/A converters for appropriate conversion of analog audio to digital signal);

A comparator that receives the audio signal from said receiver, and that receives at least a first of the least one criterion from said memory, wherein said comparator compares the audio signal to the first criterion, and wherein said comparator outputs at least one result of the comparison (abstract teaches a "voice transformation means" that processes the inputted/received voice with the selected voice color data/criterion); and

An adjustor that adjusts the audio signal based on the result of said comparator (Abstract teaches changing the inputted voice to an outputted voice that is adjusted per the selected voice color data).

but is silent on wherein the at least one criterion is variance from a pre-determined normal value.

McLoughlin teaches examination of background noise and adjusting the voice based on this value, which reads on variance from a pre-determined normal value, eg. no noise present).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that the at least one criterion is variance

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from a pre-determined normal value, to provide means for measuring/checking that operational parameters are within predetermined normal ranges thus ensuring optimal communications occurs.

As per **claim 30**, Masao teaches an apparatus for providing a custom profile in a wireless device (Abstract teaches transmission means and figure shows an antenna for wireless communication #20), comprising:

A memory into which at least one criterion is entered by a user of the wireless device (Abstract teaches voice color data storage #40);

A receiver that receives an audio signal (abstract teaches processing both the read voice color data and transmitter's speech signal which inherently requires receiving the transmitter's speech signal. The examiner notes that the figure shows both input and output ports, #11 and #15 for inputting/outputting of audio signals since they are connected to A/D and D/A converters for appropriate conversion of analog audio to digital signal);

A comparator that receives the audio signal from said receiver, and that receives at least a first of the least one criterion from said memory, wherein said comparator compares the audio signal to the first criterion, and wherein said comparator outputs at least one result of the comparison (abstract teaches a "voice transformation means" that processes the inputted/received voice with the selected voice color data/criterion); and

An adjustor that adjusts the audio signal based on the result of said comparator (Abstract teaches changing the inputted voice to an outputted voice that is adjusted per the selected voice color data).

wherein the adjustor runs the audio signal through free-form voice modification filtering (abstract teaches processing transmitter's voice with selected voice color data to change it) AND first criterion is at least one stored voice data (abstract teaches voice color data being stored/selected) **but is silent on** to heighten understandability and reduce variance from the at least one stored recognition template.

Masao teaches storing voice color data which reads on a stored template since it represents stored values/procedures (eg. a template) as to how the device is to adjust the transmitter's voice to be changed.

McLoughlin teaches heightening understandability by reducing the amount of background noise (eg. variance from zero noise present) which improves intelligibility.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that it heightens understandability and reduces variance from the at least one stored recognition template, to provide means for assisting the parties-to-the-call to better understand and identify the people on the call.

As per **claim 66** Masao teaches claim 59 **but is silent on** wherein the criterion is variance from a predetermined normal value.

McLoughlin teaches examination of background noise and adjusting the voice based on this value, which reads on variance from a pre-determined normal value, eg. no noise present).

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Masao, such that the at least one criterion is variance from a pre-determined normal value, to provide means for measuring/checking that operational parameters are within predetermined normal ranges thus ensuring optimal communications occurs.

Allowable Subject Matter

Claims 32-39 are allowed. The independent claim contains novel material not found in the prior art of record (per the examiner's recommendation).

Claims 60-65 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims recite highly specific designs not found in the prior art cited.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta
Primary Examiner
6-29-2005

A handwritten signature in black ink, appearing to be 'SD' or 'D'Agosta', located below the typed name.